

The applicants hereby request an amendment to the specification of the application. The applicants believe that this amendment is in accordance with US practice including 37 CFR 1.121.

In the Specification

Please delete paragraph [0001] on page 1 and replace it with the following new paragraph:

[0001] The present patent application is a continuation-in-part of U.S. patent application Ser. No. 09/947,768 (filed Sep. 5, 2001), now abandoned. And 09/947,768 claims priority from U.S. Provisional No. 601230570 (filed Sep. 5, 2000), patent application Ser. No. 09/947,768 is a continuation-in-part of U.S. patent application Ser. No. 09/623,068 (filed Aug. 26, 2000), now abandoned. The present patent application is also a continuation-in part of patent application Ser. No. 09/623,068 (filed Aug. 26, 2000). Application 09/623,068 is a National Stage Entry under 35 U.S.C. 371 of, and claims priority from, PCT/US99/04376 filed (Feb. 26 1999). PCT/US99/04376 claims priority from U.S. Provisional applications No.: 60/076182 filed Feb. 27, 1998, 60/086947 filed May 27 1998, 60/076102 filed Feb. 26, 1998 and 60107673 filed Nov. 7, 1998. Each of the following patent applications are incorporated herein by reference in their individual entireties: U.S. Provisional Patent Application No. 60/230570, PCT/US99/04376, U.S. patent application Ser. No. 09/623,068, and U.S. patent application Ser. No. 09/947,768.

Please add the following new paragraph labeled [0026.1] after paragraph [0026], but before paragraph [0027] in the present application:

[0026.1] Conventional linkage study techniques are essentially one-dimensional; and the marker panels used in conventional linkage studies are essentially one-dimensional. These essentially one-dimensional marker panels are chosen based on a principle of one-dimensional closeness. The one-dimensional closeness is along the chromosomal location dimension. Such essentially one-dimensional panels attempt to achieve one-dimensional closeness (in chromosomal location) and linkage of a panel marker and the (or a) sought trait-causing polymorphism. Put another way, the markers of such panels are chosen to attempt to achieve chromosomal location closeness and linkage of one or more panel markers and the (or a) sought trait-causing polymorphism. There is also a favoring in conventional linkage study techniques for bi-allelic markers with least common allele frequencies near 0.5. Conventional, essentially one-dimensional marker panels are, however, not chosen based on using the principle of the similarity of marker allele frequency and possible trait-causing polymorphism allele frequency to increase the power of an association-based linkage test to detect evidence for linkage. An essentially one-dimensional panel of markers for a linkage study is any conventional linkage study marker panel chosen to attempt to achieve one-dimensional closeness and linkage of one or more panel markers and the (or a) sought trait-causing polymorphism.